

CLAIMS

1. A retrofit LED light tube for replacing a fluorescent light tube in a troffer fixture, the LED retrofit light tube comprising:
 - an elongated cylindrical transparent envelope;
 - a base cap at each end of the envelope, wherein the base cap comprises a first prong and a second prong extending from the base cap, wherein the first and second prongs are adapted to electrically communicate with a fluorescent light socket; and
 - at least one LED device in electrical communication with the base cap, wherein a positive terminal of the LED device is in electrical communication with the first prong and a negative terminal is in electrical communication with the second prong.
2. The retrofit LED light tube of Claim 1, wherein the LED device comprises an organic light emitting diode.
3. The retrofit LED light tube of Claim 1, wherein the at least one LED device are connected in parallel to additional LED devices.
4. The retrofit LED light tube of Claim 1, further comprising a means for protection against a voltage surge.
5. The retrofit LED light tube of Claim 4, wherein the means for protection against a voltage surge comprises a varistor positioned in parallel with the at least one LED device.

6. The retrofit LED light tube of Claim 1, wherein the LED device comprises a circuit board and a plurality of LEDs serially connected to the circuit board.

7. The retrofit LED light tube of Claim 1, wherein the envelope comprises a first half and a second half, wherein the halves are complementary and adapted to form the envelope.

8. The retrofit LED light tube of Claim 1, wherein the at least one LED device is connected in series to a half wave rectifier.

9. An LED light tube for replacement of a fluorescent light tube, the LED light tube comprising:

an elongated, cylindrical transparent envelope;

a base cap at each end of the envelope, wherein the base cap comprises a first prong and a second prong extending from the base cap; and

at least one serial string of LEDs in electrical communication with the base cap having circuitry means for connection with an AC source through a nondissipative voltage dropping element, wherein each one of the at least one serial string of LEDs are connected in parallel with the other and are enclosed in the envelope.

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10. The LED light tube of Claim 9, wherein the at least one serial string of LEDs comprises a plurality of organic light emitting diodes.

11. The LED light tube of Claim 9, wherein the at least one serial string of LEDs comprises spacedly stacked circuit boards, wherein each one of the circuit boards include a plurality of serially connected LEDs mounted thereon.

12. A troffer LED light tube fixture comprising:
 a housing comprising a tube holder, wherein the tube holder comprises electrical sockets adapted to receive and electrically communicate an LED light tube; and
 an LED light tube disposed in the tube holder, wherein the LED light tube comprises an elongated, cylindrical transparent envelope, a base cap at each end of the envelope, wherein the base cap comprises a first prong and a second prong extending from the base cap, and at least one serial string of LEDs in electrical communication with the base cap having circuitry means for connection with an AC source through a nondissipative voltage dropping element, wherein each one of the at least one serial string of LEDs are connected in parallel with the other and are enclosed in the envelope.

13. The troffer light fixture according to Claim 12, wherein the housing further comprises a reflective material disposed on a surface of the housing for maximizing the light output.

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14. The troffer light fixture according to Claim 12, wherein the at least one serial string of LEDs comprises a plurality of organic light emitting diodes

15. The troffer light fixture of Claim 12, further comprising a means for protection against a voltage surge.

16. The troffer light fixture of Claim 15, wherein the means for protection against a voltage surge comprises a varistor positioned in parallel with the at least one serial string of LEDs.

17. The troffer light fixture of Claim 12, further comprising a ballast transformer and means for bypassing the ballast transformer.

18. The troffer light fixture of Claim 12, wherein the means for bypassing the ballast transformer comprises a voltage reduction circuit and frequency reduction circuit.

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